

# A Journey of Change

MIRA - Saving Lives of Mothers and Children



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**MIRA – Saving Lives of Mothers and Children**

**Hilmi Quraishi (Ashoka Fellow)**

**&**

**Subhi Quraishi**



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## Acknowledgements

This book, *A Journey of Change*, has been developed by ZMQ as part of their MIRA programme in India, Uganda and Afghanistan. MIRA is an innovative strategy developed by ZMQ to improve Maternal and Child Health indicators using *mHealth* approach, which helps in building the capacities of community health workers and rural women in the low and middle income countries. MIRA is a low-cost innovation which brings in value for money by impacting large number of beneficiaries with maximized health economic benefits.

Initiated with support from FICCI and Technology Development Board (Government of India) through Millennium Alliance consortium in 2015, it received further support from USAID in India and by DFID in other global regions. We are grateful to our donors and supporters in making this mission a reality. We thank our implementation partners in Uganda and Afghanistan. With special mention to the two teams - Health Child (Uganda) under Ms. Betty Walakira (Executive Director), Mr. Frank Balidawa (Project Coordinator) and their ground team; and Afghan Institute of Learning (Afghanistan) under Dr. Sakena Yacoobi (CEO), Mr. Jamshid Amini (Project Coordinator) & the ground team. We also thank the Ministries of Health in the respective countries for embracing MIRA technology, and their support and commitment in this arduous journey.

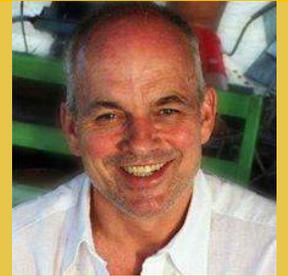
We would also like to thank ZMQ MIRA team - Ms. Ayushi Singh (Programme Manager), Mr. Abdul Muttalib (Lead Database Systems), Mr. Mohd Faisal (Lead Mobile Development), and Ms. Sunita Rathi (Programme Coordinator) for developing the technology, managing the implementation and providing technical support in the three different geographies.

We express our heartfelt gratitude towards the volunteers, community health workers, midwives and health teams in these countries who have worked with us unwaveringly to implement MIRA. Last but not the least, we thank our communities – women and their families, the children and adolescent girls who trusted us as equal stakeholders and adopted our solution for ensued results.

## Testimonials

India has proved yet again, to be a leader in thought and practice on inclusive and frugal Innovations. ZMQ's work using innovative and low cost technology from India on project 'MIRA Channel' on Maternal & Child Health has demonstrated this in Uganda and Afghanistan. MIRA uses mobile technology to save the lives of pregnant women and infants. These small investments with big human impacts make us proud and passionate about the role that DFID has been fortunate to play in enabling ZMQ's work with poor communities.

***Gavin McGillivray***  
***Head of DFID India***



USAID is proud to partner with ZMQ in their drive to find innovative technological solutions that improve access to medical care for those most in need. For their work in Maternal & Child Health under MIRA 'talking tool kit' to enhance women's and adolescents uptake of health services, ZMQ has succeeded in furthering USAID's mission to build a healthier, more empower India.

***Xerses Sidhwa***  
***Director of the Health Office,***  
***USAID India***



ZMQ has been one of the most promising social enterprises Millennium Alliance has supported. ZMQ's MIRA Channel has scaled in Uganda and Afghanistan, and is now going to Rwanda. It has indeed demonstrated measurable impact.

***Nirankar Saxena***  
***Deputy Secretary General,***  
***FICCI***



## About the Authors

Twin brothers, **Hilmi Quraishi** and **Subhi Quraishi**, are the co-founders of ZMQ, a global 'Technology for Development' social enterprise founded in 1998. With their schooling done in New Delhi, India; they completed their MS degrees in Computer Science from Russia and also began their doctoral studies. But due to unfortunate demise of their father Prof. Zaheer Masood Quraishi, both Hilmi and Subhi returned to India to embark upon a new journey. With staunch Gandhian values instilled by their father, they decided to continue their father's vision of a just society and conceived the idea of an organization which can serve the under-privileged and marginalized, known today as **ZMQ** after their father, as a tribute to him.



Hilmi & Subhi have dedicated 20 years in enabling ***Digital transformation of poor and marginalized communities***, and have brought in a substantial systemic change in addressing critical social issues using digital technologies. They have created numerous people-centric models which are being used successfully across the globe. Along with their passionate ZMQ team, twin brothers have established more than 40 system-changing programmes and 120 behavior change communication initiatives using digital strategies. Winners of several international awards like Digital Transformation Award 2018, UNESCO Digital Literacy Award 2017, Schwab Fellowship Finalist 2016 and UNDP World Business Award; they are prominent speakers on social technology forums and their works are regularly published in newspapers and magazines worldwide. Hilmi is also an Ashoka Fellow recognized for his technology-based innovations for the world's most urgent social problems. He has also been an Ashoka-Globalizer three times.

*'You can temporarily capture geographies by waging wars, you can control markets by flooding products, but you can win the hearts of communities only by doing social good.'*

**Subhi Quraishi, CEO ZMQ**

*'Digital Connectivity has broken all the barriers. It has reached in the hands of remote communities and poorest of the poor. It has enabled human development by building sustainable models. Anymore, no woman should die while giving birth to a child, no child should be left without education, no youth should remain unskilled, no farmer should succumb with their produce and no voice should be left unheard.'*

**Hilmi Quraishi, Ashoka Fellow & Co-Founder ZMQ**

## Introduction

Witnessing the alarming incidences of farmer suicides in 2009 due to non-repayment of loans, ZMQ approached MFIs (Micro-Finance Institutions) and SHGs (Self Help Groups) to understand the situation and respond in the best possible manner. Working closely with SHGs revealed appalling insights on the viciousness of loan cycles and demanded immediate attention. ZMQ was quick to develop two kinds of responses for SHGs. Firstly, entrepreneurship building and livelihood training programme which later morphed into ***Ajeevika Connect*** programme. Secondly, with women at the helm of SHGs, a need for lifeline training programme on critical women health issues was evident for which ZMQ introduced ***Women Mobile Lifeline Channel***. This mobile based channel included life-saving information on topics like Pre-natal Care, Post-natal Care, Immunization, Adolescent Health and Family Planning, and later led to birth of the **MIRA Channel**.

MIRA Channel is a holistic information, communication and service strengthening system which not only includes icon-based messages embedded with local audios but also connect communities with public health services, and enable tracking of beneficiaries through a monitoring system, track services delivered and actions taken by community health workers, and their response to high risk pregnancies. Additional tools like digital story-telling for effective behavior change and IoT(Internet of Things) toys for unreached communities have enhanced the MIRA Channel. MIRA is on a growth path- reaching to unreached geographies and continuing progressive innovations.

ZMQ's strategy of solving any critical social problem is based on a *system-change* approach than mere technology-enablement approach. Various policies and processes have been designed three decades back or more, and are based on 'top-down' models with a strong supervision; making the system non-inclusive in nature and treats target groups as mere beneficiaries. With the ubiquity of mobile networks, ZMQ adopted *system-change* approach by integrating communities as part of the solution, making it an inclusive *bottom-up* model. This technology-linked community approach empowers communities and gives them more control of information and services, which they never earlier had.

Today, MIRA is globally recognized as one of the most effective strategies to improve Maternal and Child Health indicators in Low and Middle Income Countries. It is also part of the global movement '*Every Woman Every Child*', launched by UN Secretary-General that mobilises and intensifies international and national action by governments, multilaterals, private sector and civil society to address major health challenges faced by women, children and adolescents around the world.

# 1. Maternal & Child Health – A Global Concern

Sustainable Development Goals (SDGs) aim to improve global figures on Maternal and Child Health issues which remain a critical global concern for action. SDG 3, which ensures healthy lives and well-being for all at all ages, translates previously intended Millennium Development Goals (MDGs) on health into the present agenda and has a sharp focus on reducing maternal mortality, ending preventable newborn & child deaths, and ensuring universal access to sexual & reproductive healthcare services.

While there has been a noticeable decline in under-five mortality rate (from 53 in 1991 to 43 in 2015 for every 1000 births) as well as maternal mortality rate (385 in 1991 to 216 in 2015 for every 100,000 live births); the gains nonetheless are not enough to achieve vision 2030 where we envisage a safe world with every woman, child and adolescent with access to a healthy life. Continuation of unachieved targets illustrates a need for urgent and re-strategized efforts.



Mothers with their infants waiting outside Wakitaka HC III in Jinja district, Uganda



Mothers with their infants at Jagharthan clinic in Herat province, Afghanistan

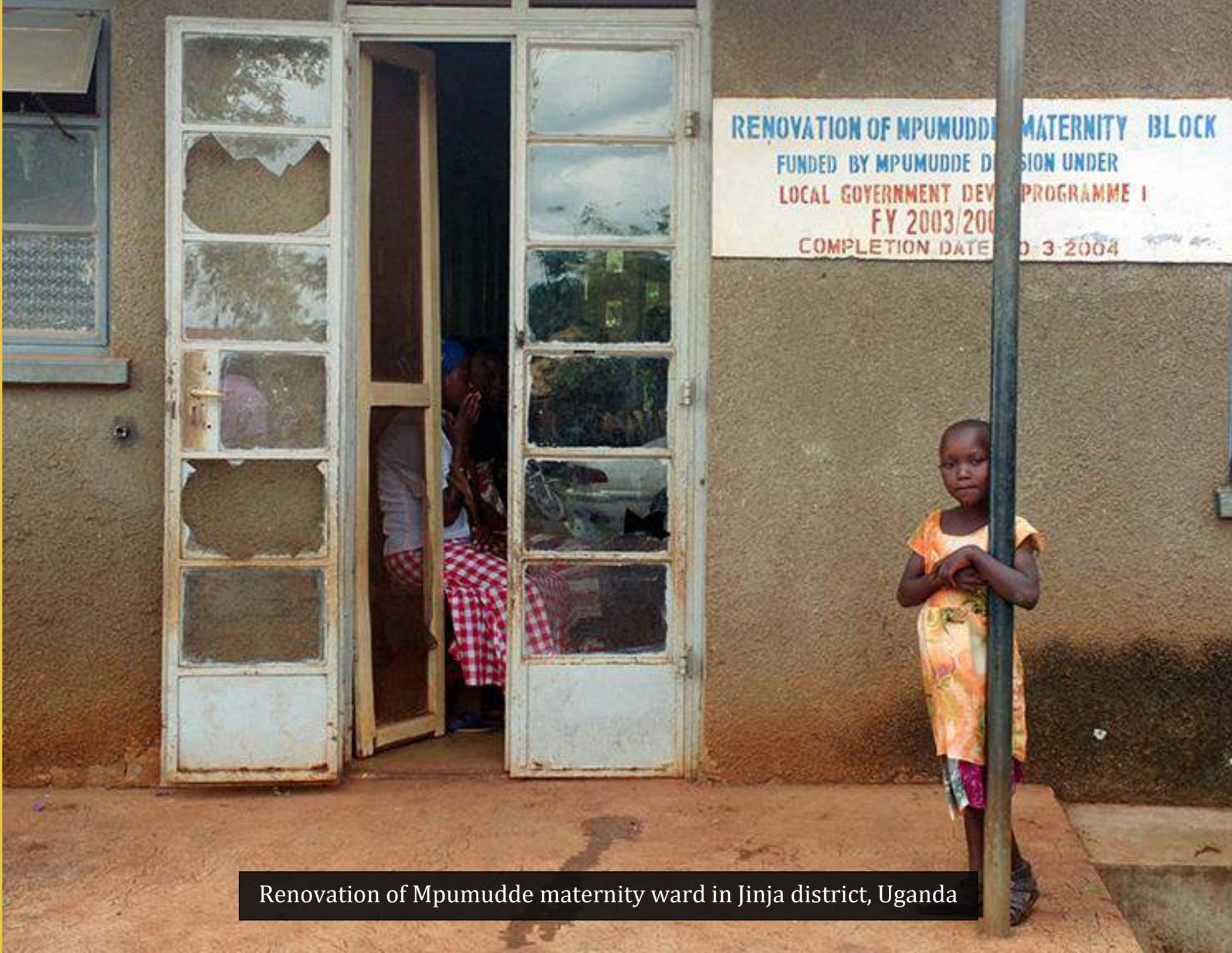


Mothers with their infants at PHC Tauru in Mewat district, Haryana, India

## 2. Current Challenges of Delivering MCH

Developing countries, amidst their various developmental growth policies have prioritized Maternal and Child Health programmes which focus on improved access to basic health care services for the last mile population – pregnant women, infants, their mothers and adolescent girls; articulated as RMNCH+A (Reproductive, Maternal, Newborn, Child and Adolescent Health) approach. Some of the most strong and widely established models of health service delivery in the developing countries are done through the community health workers like Accredited Social Health Activists (ASHAs) in India, Village Health Teams (VHTs) in Uganda and Community Health Workers (CHWs) in Afghanistan.

However, despite their wide reach, these actively functioning networks of community health workers remain short in their efficacy owing to several challenges. Lack of personnel capacities, increasing multiplicity of work load, lack in consistency of delivery of advisories and absence of a support system etc. limit their abilities to serve growing numbers of beneficiaries effectively. On an average, such worker takes care of about 800 – 1000 people with inadequate management skills, inefficient technological support mechanism and meager pay rates. This leads to delay in service delivery, inconsistent advisory services and even loss of patients. It reflects a critical lacuna in our efforts in providing affordable and efficient health care services on the ground.



Renovation of Mpumudde maternity ward in Jinja district, Uganda



Maternity ward in Bugembe HC III in Jinja district, Uganda,



Pregnant women visiting the health clinic for ANC checkups in Herat province, Afghanistan



Health camp for mothers and children in Dhidara village in Mewat district, Haryana, India



Mobile health van in Rangala village in Mewat district, Haryana, India

### **3. Deciphering MCH through Technology**

Most of the Maternal and Child Health programmes are addressed without any technological interventions, and if there are any, they use mobile text messages which are delivered to women beneficiaries who semi-literate or illiterate. Some developing countries like India also use a Maternal and Child Tracking System (MCTS) to collect data from the ground which gets uploaded on the server. But this data gets uploaded on the server with a delay of 2-3 months, making it impossible to deliver real-time services to the beneficiaries. Hence, in case of any emergency, it is almost impossible to save the mother or the child.

With the current scenario of connectivity and reach of technology in the hands of the people, there is a need to have bottom-up methodology to redefine stakeholders and redesign approach of working with them. MIRA Channel is such a technological advancement which can transform Maternal and Child Health system by reaching the last mile, making them custodian of their health and provisioning them real-time services.



Midwives maintaining ANC record at Kakira HC III in Jinja district, Uganda



Need assessment done by ZMQ team in Herat province, Afghanistan



ZMQ team introducing MIRA toolkit to MIRA workers (VHTs) in Jinja district, Uganda

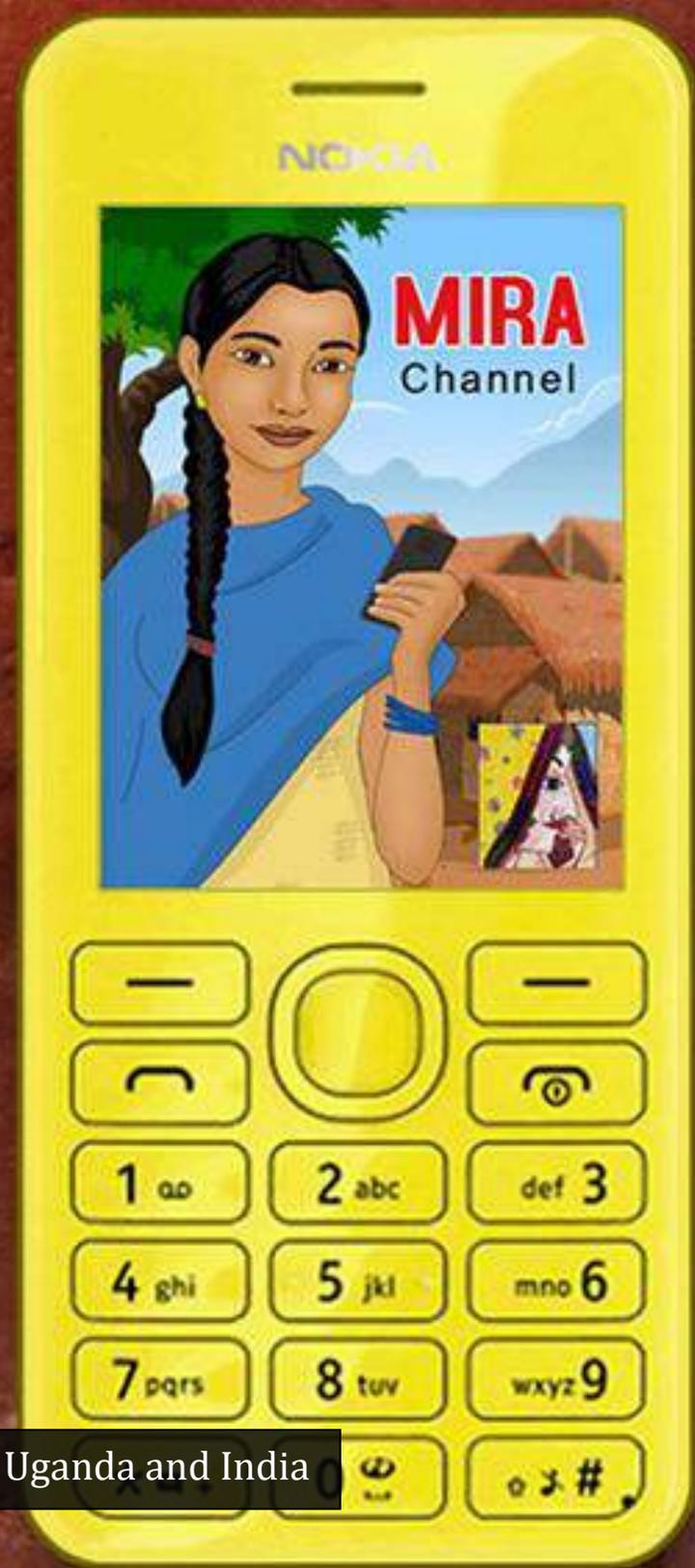
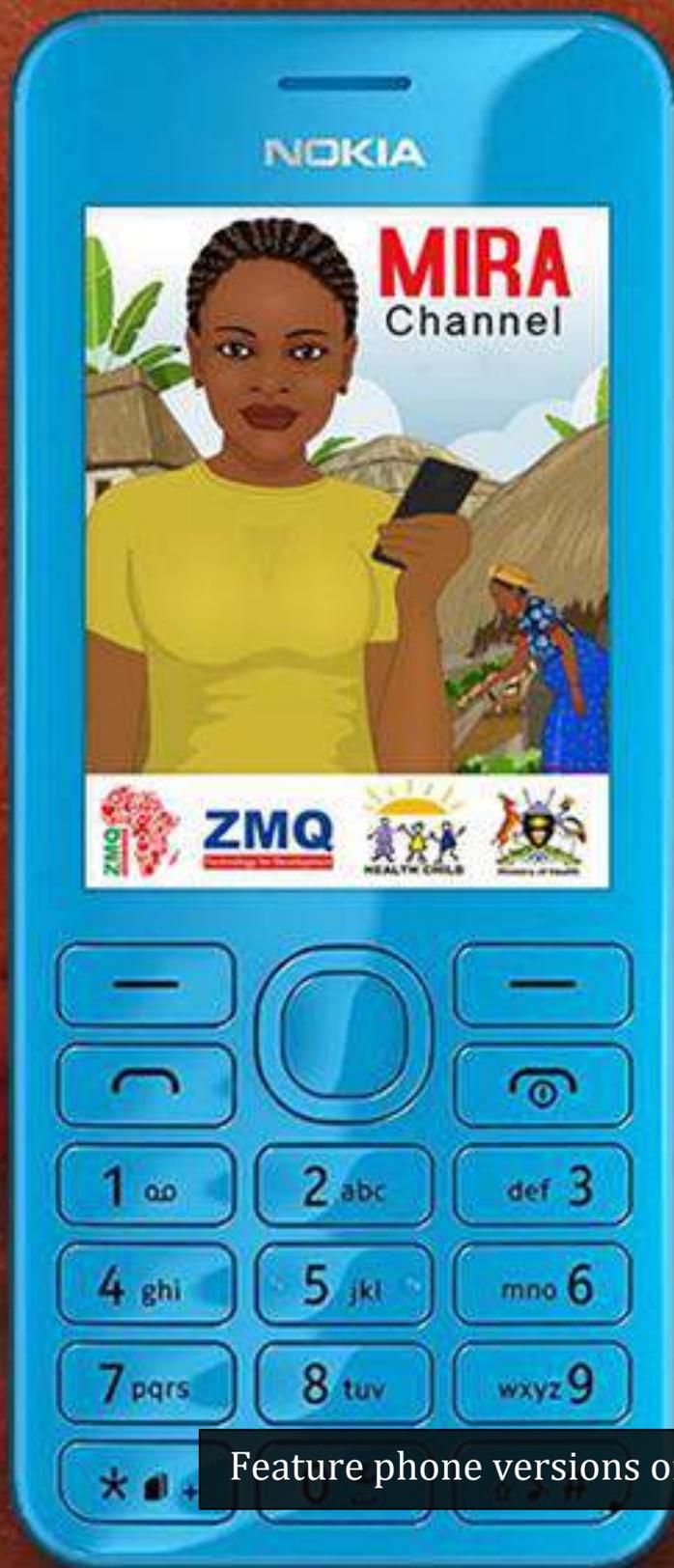
## 4. MIRA - A Last mile Healthcare System

MIRA Channel is an integrated mobile-phone channel to strengthen last-mile health system by effectively delivering basic maternal and child health packages to communities. It provides health information & communication to rural women; has a built-in progress tracking tools such as calculators and analyzers for managing health of mothers and children; and connects communities with health system for timely service delivery. The solution offers holistic in-app based modules referred to as '*Channels*' onto basic health services which includes Antenatal Care, Postnatal, Newborn Care, Routine Immunization, Family Planning and Adolescent Girl Health following the RMNCH+A approach.

MIRA opens up new opportunity for rural women to get timely information, generate demand and build new service seeking behaviors. MIRA Channel works in three distinct modes – MIRA App, MIRA Toolkit and MIRA-PHC Connect. MIRA App is an individual toolkit used community women enabling self-management of health. MIRA toolkit is devised for CHWs which delivers weekly information to women on diet, medication, dows and dows and captures weekly high risk pregnancies. In MIRA-PHC Connect, the MIRA toolkit of the CHWs gets connected with their midwives using ANM toolkit to track the live-progress of women and their high risk pregnancy symptoms for timely action. Available both for feature phones and smart phones MIRA has an ability to work on 100% off-line mode for communication and progress tracking making it a technological breakthrough in public health solutions.



MIRA Uganda team doing household registrations in Walukuba division in Jinja district,



Feature phone versions of MIRA toolkit for Uganda and India



Home visit by a MIRA worker (VHT) with MIRA Toolkit in Bugembe in Jinja district, Uganda



Health MIRA worker with MIRA Toolkit during a home visit in Rangala village in Mewat district, Haryana, India



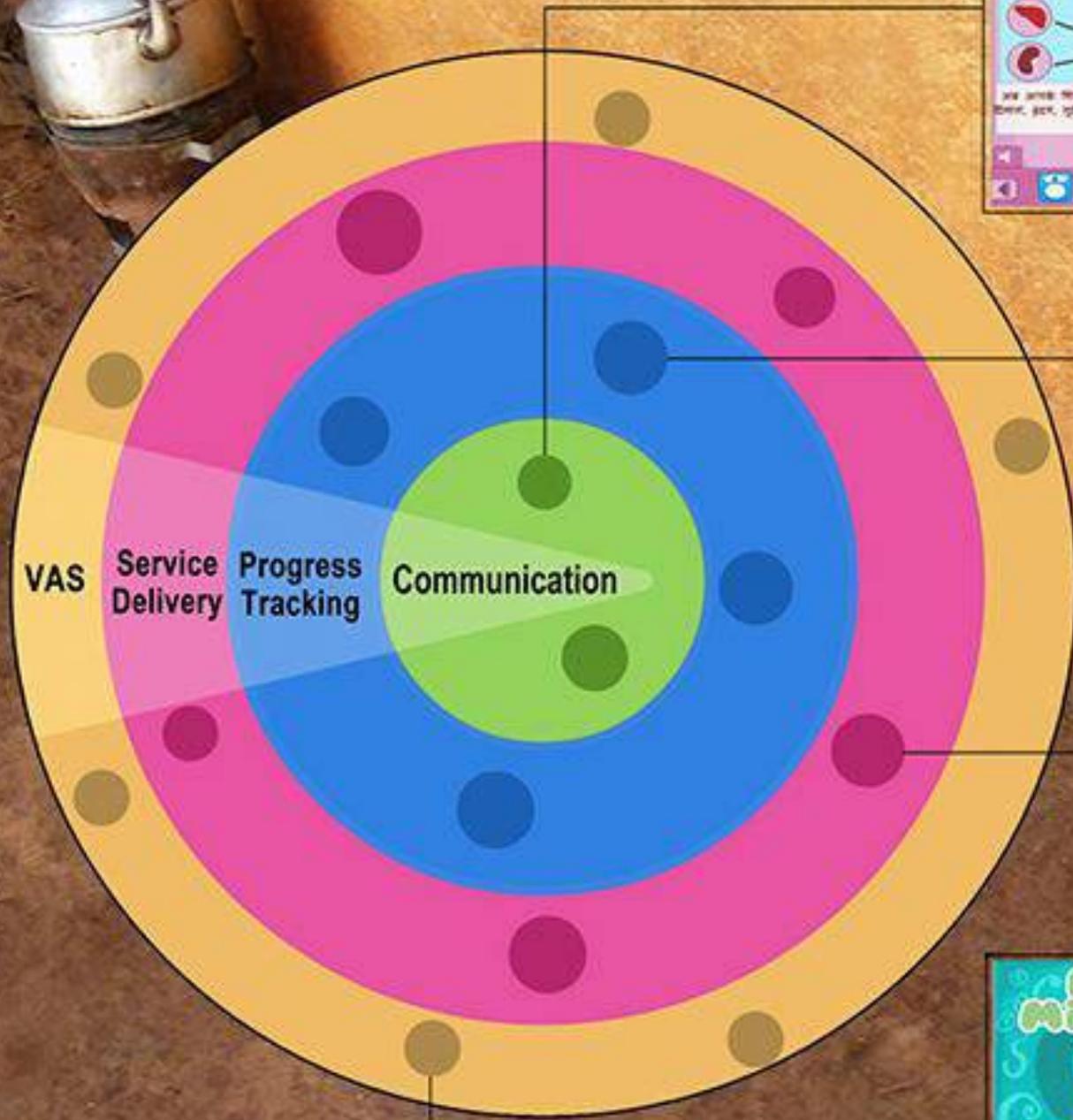
Home visit by a MIRA worker (CHW) in Kabarzan village in Herat province, Afghanistan



Home visit by a MIRA worker in Mohammadpur village in Mewat district, Haryana, India



MIRA worker (CHW) delivering critical pre-natal care information through MIRA Toolkit to a beneficiary in Chiry village in Herat province, Afghanistan



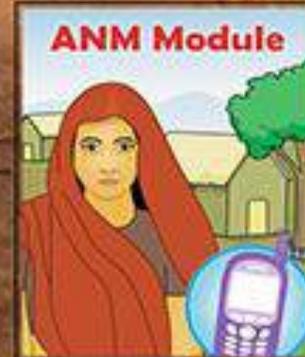
### Communication

- Pre-natal Care
- Immunization
- New-born Care
- Family Planning
- Adolescent Girl Health



### Progress Tracking

- Pregnancy week-by-week
- Immunization Tracker
- ANC Tracker
- Post Natal Care Tracker
- Menstrual Cycle Calculator



### ANM Module

### Service Delivery

- ANC Visits (PHC Connect)
- High Risk Pregnancy Referral
- RI & SIA Rounds
- Institutional Delivery
- Emergency Services



### VAS

- Decision Story Telling
- Social Mobile Games
- Training Tools
- Skills Development

**MIRA Model of Delivery**



MIRA worker capturing High Risk Pregnancy Symptoms of a beneficiary in Jinja district, Uganda

## 5. MIRA: Building Communication for Healthy Behaviours

MIRA Channel uses innovative digital communication approach for *Social and Behaviour Change Communication* (SBCC) to interact with less literate women for impactful results. A significant characteristic of MIRA's user interface is its icon-based symbolic language which does not require any literacy skills to understand the messages. This iconic language is quick to understand and easy to retain. Secondly, the '*Talking Toolkit*' which contains audio messages in local language further facilitates message transmission to millions of women irrespective of their literacy skills.

Designed with highest levels of precision, MIRA Channel has been able to overcome barriers of digital technology by solving issues of low literacy, language differences and digital disconnect owing to highly contextualized visuals and audio information features. The content and the icon-based graphics are designed together with the communities by conducting workshops. Access to information is the first step towards a practice change. Today, millions of women are able to access basic information on a week-by-week basis which is related to healthy diet, medication, routine immunization, pregnancy care, childcare and danger signs in a language they understand.



MIRA worker (CHW) exploring MIRA toolkit in Maladan in Herat province in Afghanistan



MIRA worker (VHT) dispensing critical health information to a pregnant woman in Kakira town in Jinja district, Uganda



MIRA worker delivering pregnancy management information to a woman in Jaurasi village in Mewat district, India



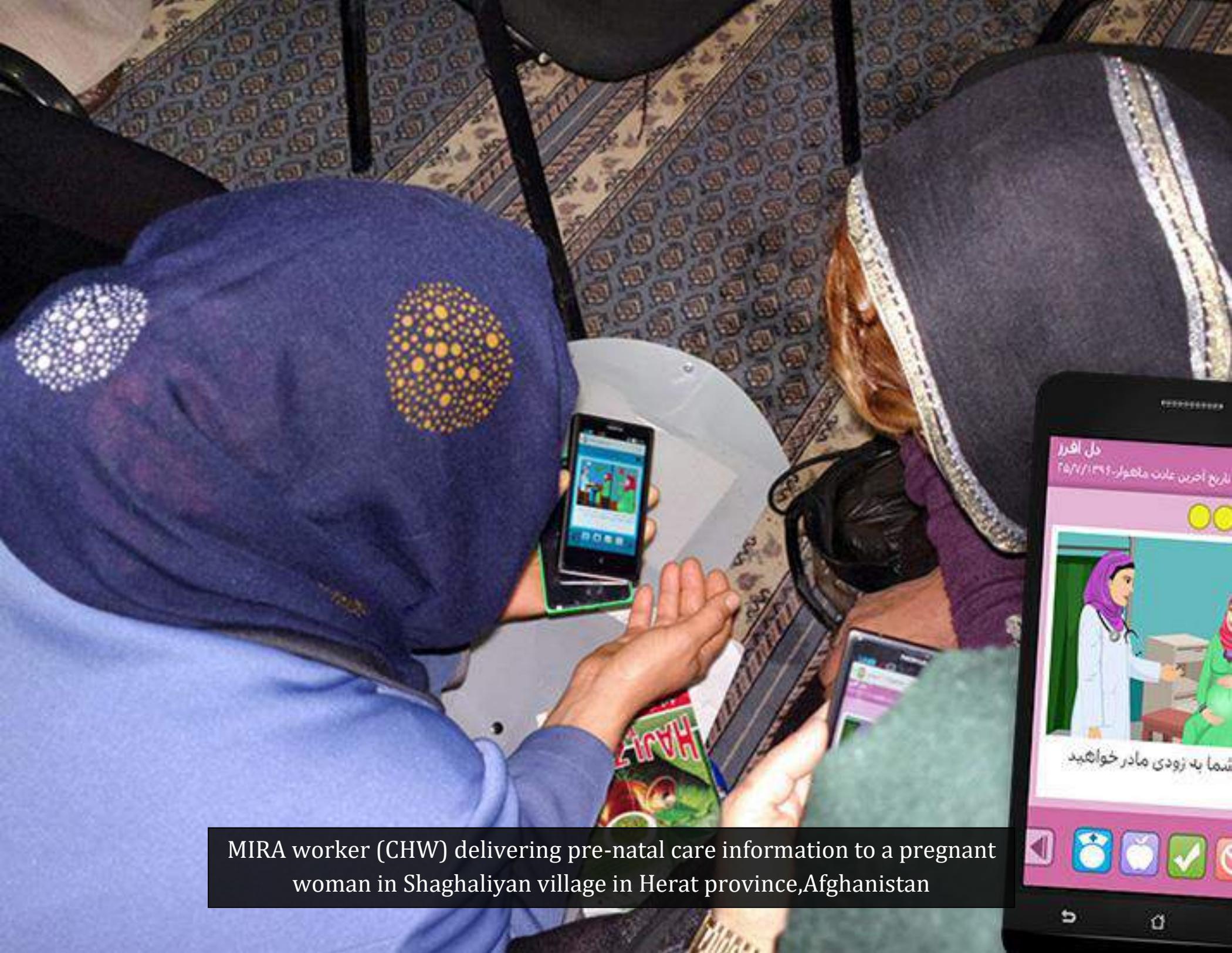
Timely information being delivered to a pregnant woman in Sunari village in Mewat district, India



MIRA worker (VHT) delivering pre-natal care information to a pregnant woman in Namulesa parish in Jinja district, Uganda



MIRA worker (VHT) delivering critical pre-natal care advisory to a beneficiary during a home visit in Kyamagwa village in Jinja district, Uganda

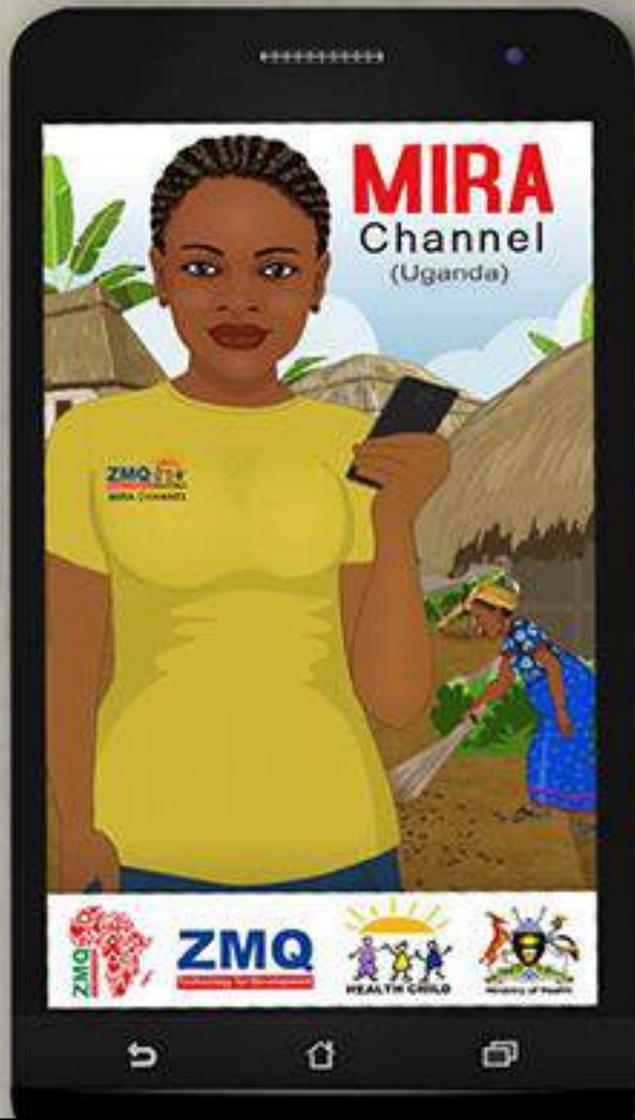


MIRA worker (CHW) delivering pre-natal care information to a pregnant woman in Shaghaliyan village in Herat province, Afghanistan

## **6. MIRA: Continuous Progress Tracking**

A differentiating component of MIRA Channel from any other solution is its built-in progress tracking tools such as trackers, calculators and analyzers for managing pregnancies. Some of the tools are Pregnancy week-by-week tracker, ANC calculator, Immunization calculator, Postnatal & Newborn progress tracker, menstrual cycle calculator and High Risk Pregnancy indicator (Analyzer). These built-in tracking tools help Community Health Workers (CHWs) and women beneficiaries remain updated with progress of each pregnancy, its due delivery date, ANC date, immunization date and High Risk Pregnancy (HRP) status.

The MIRA toolkit used by health workers contains all the essential progress indicators and updated data of every beneficiary woman ensuring timely communication and delivery of services. These health calculators and progress trackers are integrated with audio-visual instructions and serve as reminder-recall alerts which are shared by MIRA with the woman during their weekly visits. These tracking tools also lead to another key outcome – empowering women to understand, articulate and respond to their health needs. They not only become aware but are also able to manage their health themselves.



Esther, a MIRA worker (VHT) commencing her day with home visits in Jinja, Uganda



MIRA worker (VHT) visiting Budumbuli village to deliver information to a new mother and a pregnant women in Jinja, Uganda



MIRA worker (VHT), Esther training a new mother on how to breastfeed her child

Reg Date	Women Name				
08/11/2016	Namiro				
LMC Date	Start Week				
05/05/2016	18				
House No.	Current Week				
022	29				
Weeks	Q1	Q2	Q3	Q4	Q5
Week 18	●	●	●	●	●
Week 19	●	●	●	●	●
Week 20	●	●	●	●	●
Week 21	●	●	●	●	●
Week 22	●	●	●	●	●
Week 23	●	●	●	●	●
Week 24	●	●	●	●	●
Week 25	●	●	●	●	●



MIRA worker delivering key information around pregnancy to a first-time pregnant woman in Hasanpur village in Mewat, India



MIRA worker (CHW) training a new mother on how to breastfeed her child in Herat province, Afghanistan

## 7. MIRA: Revamping Service Delivery

A remarkable feature of MIRA Channel is its integration with the last layer of public health delivery system i.e. Midwives or Nurses for timely delivery of health services like ANCs, Immunisation, Delivery of IFA tablets, High Risk Pregnancy care, Institutional delivery, Postnatal care, Neonatal care and other Emergency services. Through the ANM toolkit, the Midwife can track all the activities of each health worker functioning under her and also monitor progress of all the service beneficiaries (women and children) in her area. ANM toolkit helps in initiating timely service delivery for each woman. Midwife can send requests to CHWs for ANC check-ups, Immunisation requests, various medical services/needs and institutional delivery initiation.

Using the MIRA toolkit, a CHW also asks woman the five symptomatic questions related to High Risk Pregnancy (HRP), which is answered by the woman as 'Yes' or 'No'. In case of any positive answer, the message is instantly sent over the cloud from MIRA toolkit to the ANM toolkit. Based on the status, Midwife needs to resolve the HRP query raised by CHW thereby taking an immediate action, which is automatically reported back to the CHW, thus mitigating the HRP. This three-layered system not only helps in delivering health services timely for each woman, but it also functions as a two-way communication channel between the service provider and receiver, which is a critical challenge in most inaccessible and fragile regions.



Midwife Nakuba Mary sharing ground challenges around maternal and child health in Kakira HC III in Jinja district, Uganda





Midwife inoculating an infant during the Immunization day in Sutaka village in Mewat district, India



Midwife taking actions on HRP cases reported in Jinja district, Uganda



Pregnant woman undergoing a regular ANC check-up in Maladan health center in Herat province, Afghanistan

## **8. MIRA: Real-time Data**

MIRA platform uses a robust backend system and stores all its data on the cloud. It provides multi-tier 'Live-activity' dashboard for all hierarchical levels of public health system. The platform produces instantaneous 'Real-time' data for the authorities to make immediate decision and take timely action. The dashboard can be viewed by the relevant health office on a minute-to-minute basis to review the status of women beneficiaries, progress of CHWs, ANC check-ups, High Risk Pregnancies and activities of Midwives. The state can then immediately take action based on the status of the women and/or performance of CHWs and Midwives.

The 'Live-activity' dashboard makes the system highly transparent. It creates an efficient system with an adequate amount of transparency in operations at various levels. The system can immediately identify the level of hierarchy which has failed in delivering the service by not acting at the right time.

# گراف مقایسه‌ای ملاقات‌ها تا میمی

موت‌های تا میمی	نام شاخص
جنریتان	نام مرکز صحی
644	کد مرکز صحی

22310	1393	هونز سالانه
25175	1394	
24930	1395	
1859	1393	هونز ماهانه
2098	1394	
2077	1395	

- رنگ‌ها -

1393	سبز
1394	قرمز
1395	بنفش



سال - سال	موت	دلو	جسر	قدس	غزنی	میزان	سبند	اسد	ارطمان	جوزا	ندر	جنس
1393	1863	1744	1795	1864	1828	1916	2145	1916	2149	1922	1872	1730
1394	1863	1744	1795	1864	1828	1916	2145	1916	2149	1922	1872	1730
1395	1863	1744	1795	1864	1828	1916	2145	1916	2149	1922	1872	1730

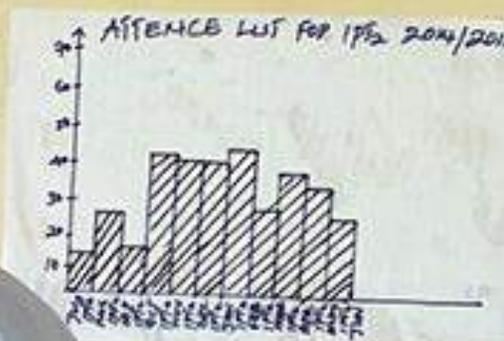
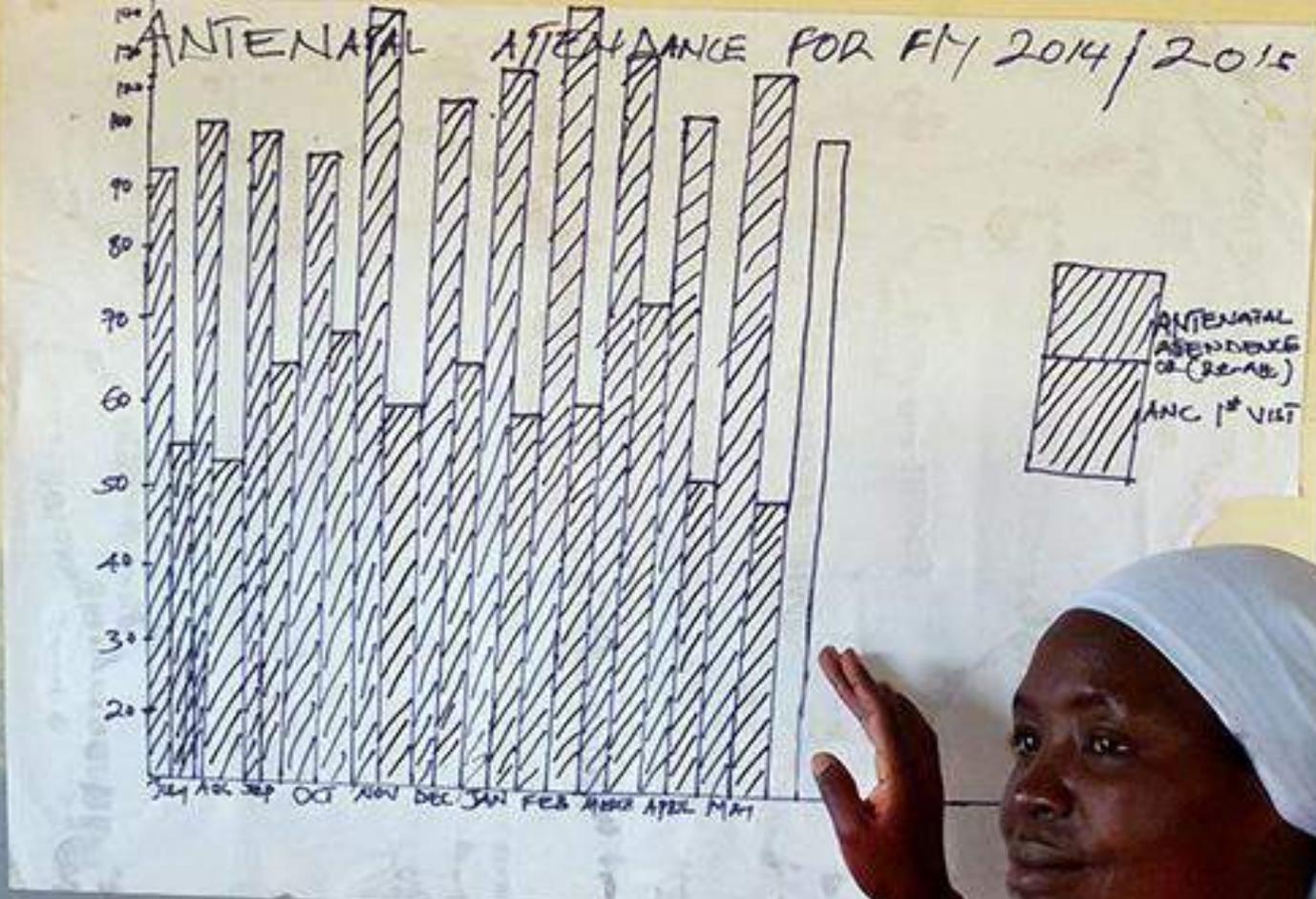
## Pregnant Women Current Week

#	H. No.	Women Name	Start Date	Week/Day	Last Week					Last Tracking					Running Week					Running Tracking						
					Q1	Q2	Q3	Q4	Q5	Time	S1	S2	S3	S4	S5	Q1	Q2	Q3	Q4	Q5	Time	S1	S2	S3	S4	S5
1	22	Annet Biibi	16-11-2016	40+2	0	0	0	0	0	---						0	0	0	0	0	---					
2	118	Kasubo Ziyadi	18-01-2017	38/2	1	1	1	1	1	00:01	✓	✗	✗	✗	✗	0	0	0	0	0	---					
3	482	Namukose. Suzan	06-07-2017	14/1	0	0	0	0	0	---						0	0	0	0	0	---					
4	485	Esither. Nakatunbo	06-02-2017	35/4	1	1	1	1	1	00:02	✓	✗	✗	✗	✗	1	1	1	1	1	---					
5	118	Awori. Ruth	13-01-2017	38/7	1	1	1	1	1	00:02	✓	✗	✗	✗	✗	1	1	1	1	1	---					
6	507	Nangobi. Safiya	15-06-2017	17/1	1	1	1	1	1	00:02	✓	✗	✗	✗	✗	0	0	0	0	0	---					
7	514	Alikoba. Scovia	21-02-2017	33/3	1	1	1	1	1	00:01	✓	✗	✗	✗	✗	0	0	0	0	0	---					
8	519	Alikoba. scovia	06-01-2017	39/7	1	1	1	1	1	00:02	✓	✗	✗	✗	✗	1	1	1	1	1	---					

## Child Immunization List

H.No.	Mother Name	Child Name	Date Of Birth	Polio and BCG	Polio 1 DPT Hep B + Hib 1, Pnemococcal 1	Polio 2 DPT Hep B + Hib 2, Pnemococcal 2	Polio 3 DPT Hep B + Hib 3, Pnemococcal 3	Measles	Vitamin A	Deworming Tablets
2	Namugoli Faridha	KALEEBA HASAN	05-12-2016	✓	✓	✓	✓	⊙	⊙	↓
111	Namuloki Mary	KUSASIRA. CHOZEN	11-01-2017	✓	✓	✓	✓	⊙	⊙	↓
157	Namuganza Fatuma	NAMPIINA. RUTH	04-02-2017	✓	✓	✓	✓	⊙	⊙	↓
40	Kwagala Beatrice	ALITUBEERA. KETTY	23-02-2017	✓	✓	✓	✓	⊙	⊙	↓
359	Nagabanga. Aziza	NAIGAGA. JANATI	19-02-2017	✓	✓	✓	✓	⊙	⊙	↓
125	Nabirye Teddy	KAZIDULA. IDII	03-01-2017	✓	✓	✓	✓	⊙	⊙	↓
63	Naigaga Florence	OWOTE. JAMES	28-02-2017	✓	✓	✓	✓	⊙	⊙	↓
91	Nampina. Prossy	NAMUKAYA	12-04-2017	✓	✓	✓	✓	⊙	↓	↓

Tracking on-ground activities through Real-time MCH data generated on the ZMQ MIRA dashboard



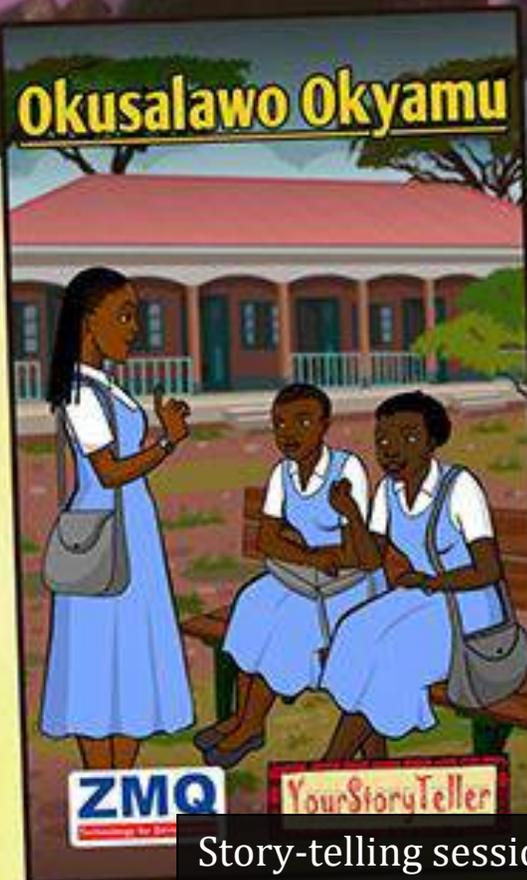
Tracking on-ground activities through Real-time MCH data generated on the ZMQ MIRA dashboard

## 9. MIRA: Enriching through Value Added Services

- MIRA Channel has Value Added Services(VAS) for rural women and community health workers to foster sustainable behaviours using edutainment. MIRA has introduced mobile based role-play games for women and adolescent girls, which uses real-life situations to solve problems. This helps the users to adopt values from their role models. Through *YourStoryTeller* initiative, MIRA provides digital stories to communities on critical aspects of RMNCH+A. This inspires the users to learn from decisions which inculcate sustainable behaviour change.
- Under *Toys4Change* initiative, MIRA has introduced IoT (Internet of Things) based toys to provide consistent information to pregnant women and children(in 0-3 years) for immunization. This has been designed seeing the need of difficulty-to-reach communities, especially those living in the remote areas and mountainous regions; and don't have any access to digital connectivity and/or mobile phones. MIRA has recently started simulated training courses for community health workers on the mobile phones to get trained and build their capacities



MIRA workers conducting game sessions in the community in Mewat district, Haryana, India



Story-telling session conducted by MIRA workers (VHTs) in Jinja district, Uganda



MIRA workers (CHWs) conducting game sessions with the community in Herat province, Afghanistan

## 10. Building New Eco-System for the Ground

MIRA Channel started from Mewat district, one of the most backward districts in India, as '*Women Mobile Lifeline Channel*' to provide critical health information to rural women. Working with thousands of poor women in Self Help Groups (SHGs), we realized that there is an urgent need to provide timely health information to these women. Hence, we carved out a programme to tackle RMNCH+A, and named it MIRA. In 2014, we signed with Haryana State Health Mission to implement MIRA in Mewat, and partnered with a local NGO Mewat Development Agency (MDA) along with five large women federations.

In Uganda, we conducted baseline surveys in Jinja (Eastern Uganda) and Kabarole (Western Uganda) districts. We met many organizations which work on MCH like UNICEF, Plan, Save the Children, FHI 360 and Engender Health to understand local needs. We identified a local women-led NGO 'Health Child' in Jinja to partner with us. In Afghanistan, we conducted baseline surveys in Kabul and Herat. We communicated with representatives from organizations like Swedish Committee for Afghanistan and Afghan Midwives Association to understand local needs. We identified a local NGO 'Afghan Institute of Learning' (AIL) in Herat as our project partner. AIL is led by renowned woman entrepreneur Dr. SakenaYacoobi (Ashoka Fellow) who has earned international recognition for her work with women and girls.



MIRA ground implementation team in Jinja, Uganda

MIRA CHANNEL  
Mobile Channel for Rural Women  
on Maternal & Child Health



MIRA ground implementation team in Herat, Afghanistan

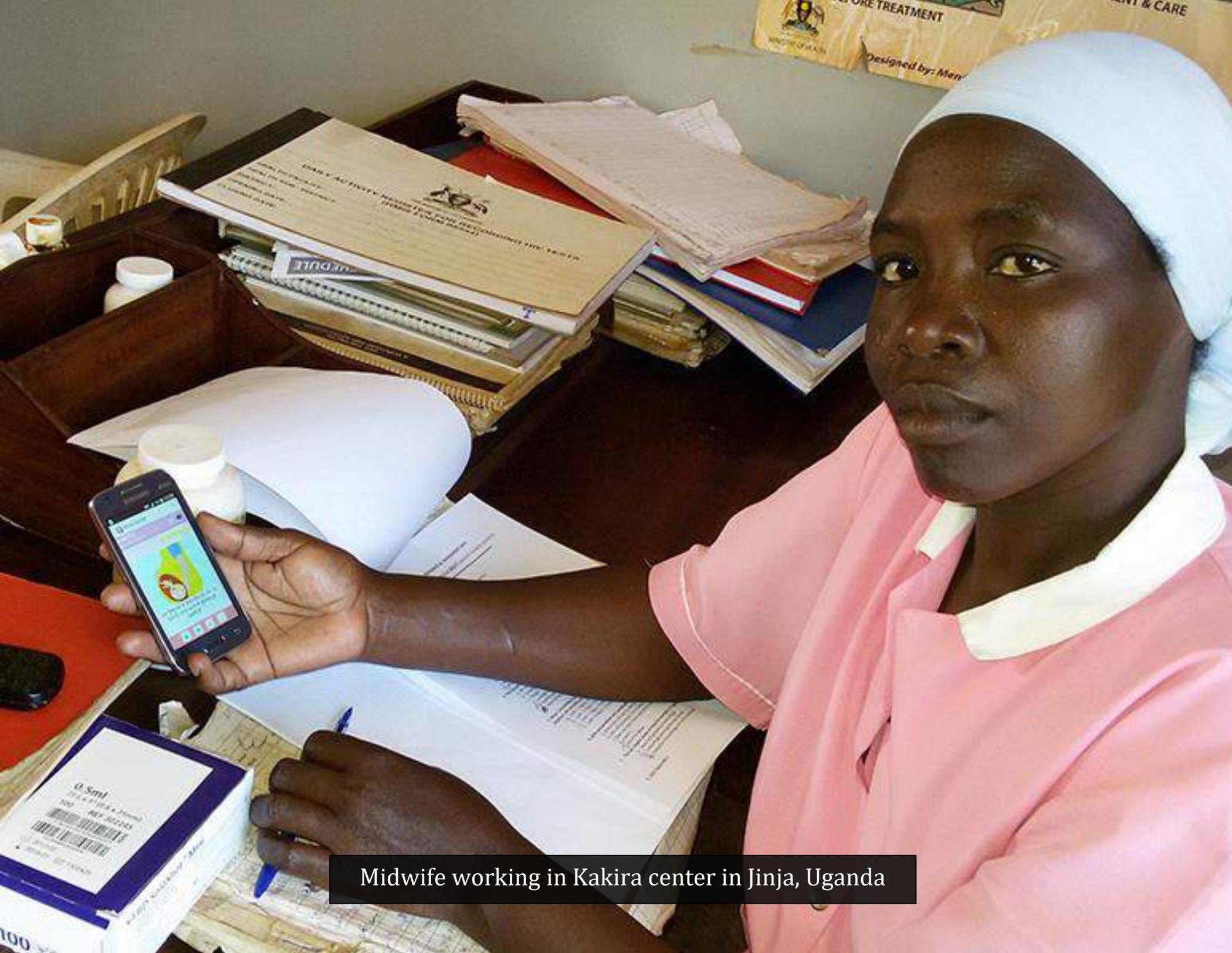


MIRA ground implementation team in Mewat, India

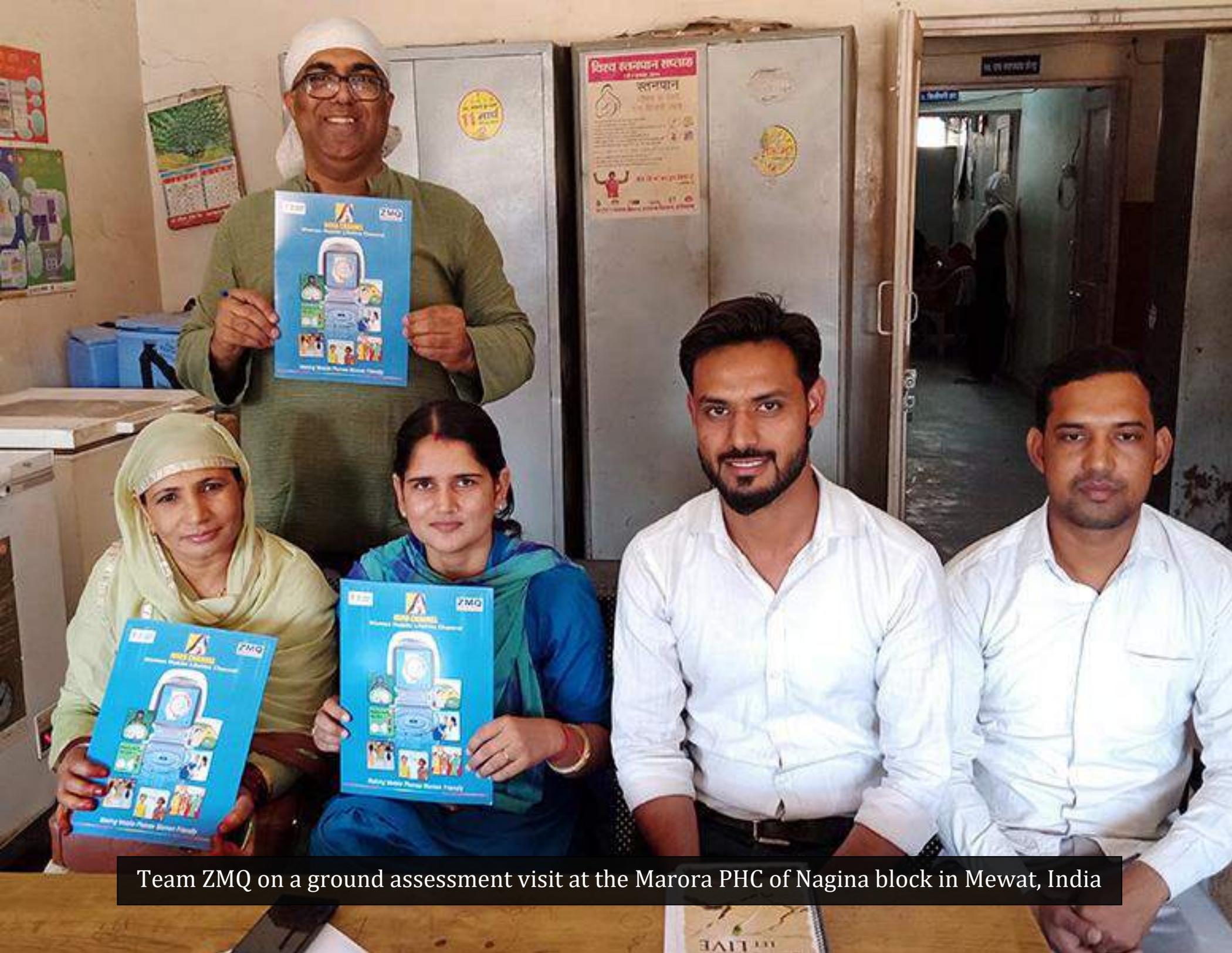


MIRA team outside Kakira MCH ward during ground assessment visit in Jinja, Uganda





Midwife working in Kakira center in Jinja, Uganda



Team ZMQ on a ground assessment visit at the Marora PHC of Nagina block in Mewat, India

# 11. Overcoming Socio-Cultural Stumbles

Different regions and communities have their unique set of challenges. MIRA's implementation is a benchmark model for studying integration of technology and social development. It demonstrated several socio-technological interweaves in its various project locations. Mewat (India), one of the most backward districts in India with 82% population from Muslim community, fares very poorly on socio-economic development indicators. With a poor female literacy rate of 36.6% and highly prevalent early child marriage traditions, Mewat results in low maternal and child health figures.

Afghanistan's Herat province was a highly difficult region owing to its security issues which made MIRA work arduous. With its mountainous geography, the region has limited number of easy access and secured roads. Difficulties multiple as the most common mode of transport is travelling by foot, donkey and motor bike. Poor condition of the roads, especially during winter due to snowfall and floods, confronts women, with difficulties to access healthcare. In Jinja district of Uganda, malaria is a major threat to pregnant women here. 62% of its population is between 0-16 years and almost a quarter of the teenagers had already given birth to a child. Women get married as early as 17 years of age. A woman here is likely to give birth to 7 children, which adds to the risk of the woman. In each of these regions, MIRA Channel worked as an essential tool which has helped impoverished women and children. MIRA has helped in transforming the health behaviours of the community.



Women in veil doing household chores in Nagina block in Mewat district, India



MIRA team conducting monitoring visits in Herat province in Afghanistan



MIRA Uganda team addressing ground challenges during a household visit in Kalungami village, Jinja, Uganda

## **12. MIRA Designing with Communities**

MIRA channel has evolved through several levels of improvisations in its developmental phase and has a malleable framework to evolve with changing community needs. Initially developed for feature phones in India, MIRA's first challenge in its global pursuit was to create a smartphone version for both Uganda and Afghanistan as feature phones were fast fading out. With this technically solved, the next was to find best connectivity provider for a smooth data inflow and outflow in every region. Customizing the content to different cultural contexts and state government guidelines in different countries (India, Uganda and Afghanistan) was a challenging task which involved a dedicated effort from ZMQ and its partner teams.

For a flawless customization, ZMQ conducted focused group discussions with local communities in Jinja (Uganda) and Herat (Afghanistan) and collected feedback on its content presentation. These workshops provided critical insights and inputs for redesigning the graphics and icons for local needs. The text and the audio content were also translated in local languages - Lusoga and Luganda for Uganda, and Dari for Afghanistan. Joint workshops were conducted with local NGOs in every region to test run the solution and numerous community visits were done to have a feel of the ground in creating appropriate solution.



MIRA worker (CHWs) discussing challenges during a community meeting in Herat province, Afghanistan



MIRA team conducting design workshop with communities in Mewat district, India

# लड़की की सुरक्षा (Girls Safety)



Adolescent girl designing a story on life-skills in Mewat district, India



MIRA workers (VHTs) reconciling household data during a ground



Ground evaluation being conducted by the donor agency in Jinja, Uganda

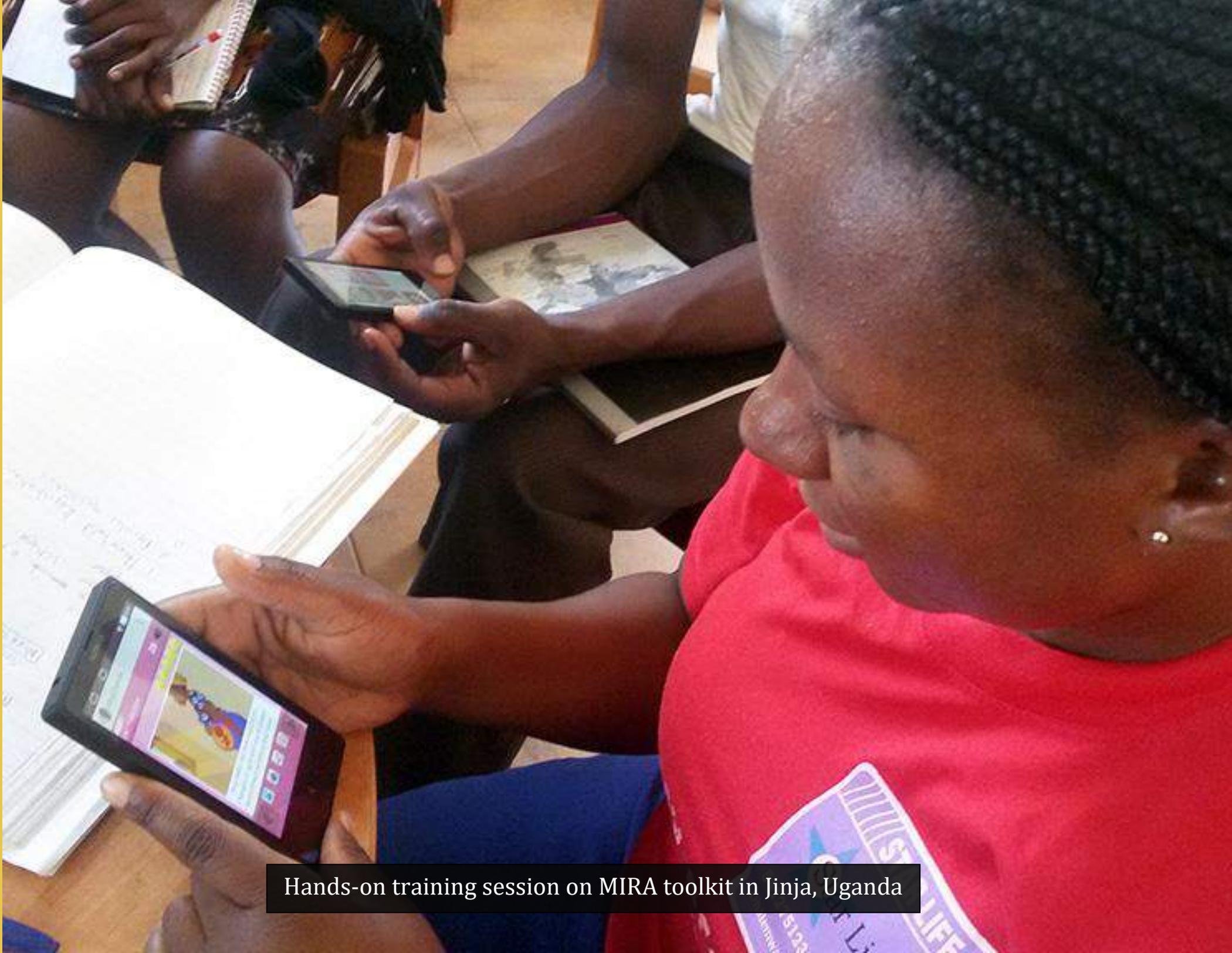
## **13. MIRA Trainings and Capacity Building**

For a flawless implementation on the ground, appropriate capacity building and grasp on the MIRA toolkit was essential. ZMQ team travelled across each country to do trainings and prepare local teams. Training manuals were produced in the local language to ensure that it can be used by Community Health Workers and Midwives. With support from local NGO partners, training-cum-testing sessions with conducted programme teams to ensure that teams understood functionality, tracking mechanism and communication system of MIRA Channel. For consistent and standardised training outcomes, master trainers were identified and trained.

Trainings focused on acquainting the CHWs with MIRA toolkit and its components. Even before this, familiarizing them with mobile phones was a critical step. They learned to create their login accounts on MIRA system, enter registration data, deliver weekly messages, track High Risk Pregnancies and submit the data. Midwives were also trained to identify messages from CHWs, take action on high risk cases and submit the data on the cloud. In Herat province, health centers in Enjil district were identified with CHWs and Midwives working in different villages. Similarly in Jinja, five sub-counties namely Mpumudde, Walukuba, Bugembe, Kakira and Mafubira were identified with CHWs and Midwives. For every five CHWs, one midwife was mapped.



Team ZMQ conducting training of MIRA workers in Mewat district, India



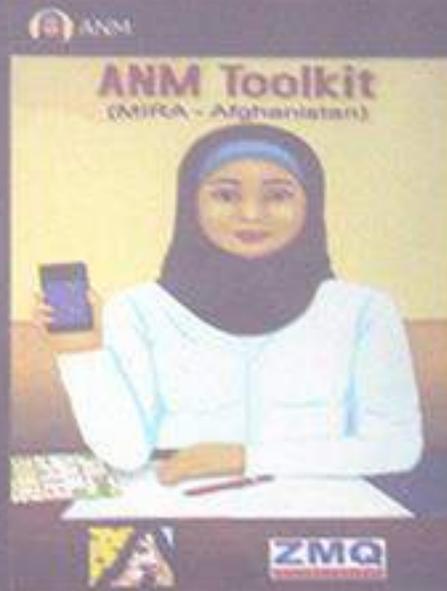
Hands-on training session on MIRA toolkit in Jinja, Uganda



MIRA team with Midwives post training session in Jinja, Uganda

# MIRA Channel

## Women Mobile Lifeline Channel



"Men need one calculator but  
Women need many more calculators"

Hands-on training session of MIRA workers (CHWs) in Herat province, Afghanistan



Master trainers receiving certificates post completion of MIRA training in Herat, Afghanistan

## 14. Embedding MIRA on the Ground

Each community health worker is provided with a MIRA toolkit and a MIRA register. The registration of beneficiaries is done both on the register and the toolkit. On the toolkit, CHWs can see the list of pregnant women to be visited with their week of pregnancy. During the weekly visit, CHW provides iconic-audio information to that pregnant woman through MIRA toolkit, based on her specific week and related information like growth of the baby in the womb, diet, medication, dos and dons. MIRA also connects woman to public health system for ANC checks-ups, immunizations, provisioning medication and any other emergency care. Similarly, information and services are also provisioned to families for their children in 0-5 years for timely immunization, and also to adolescent girls for menstrual hygiene related issues. In addition to this, MIRA toolkit provisions information related to post-natal care, newborn care, identifying danger signs and family planning.

MIRA toolkit also prompts a pregnant woman to answer to five critical questions related to High Risk Pregnancy (HRPs). Any HRP symptom found is automatically referred to the concerned Midwife, who through the ANM toolkit takes an immediate action and ensures that risk is mitigated. A multi-tier 'Live Activity' dashboard is available at the center to monitor activities, its progress and timely action taken by concerned workers.



MIRA worker (VHT) delivering pregnancy information to a pregnant woman in Jinja, Uganda



Home visits by a MIRA worker in Tauru block of Mewat district, India



Critical pre-natal care messages being delivered by a MIRA worker (CHW) during a home visit in Herat province, Afghanistan



Passionate MIRA worker (VHT) delivering maternal health information to a pregnant woman in Wanyenge village in Jinja,

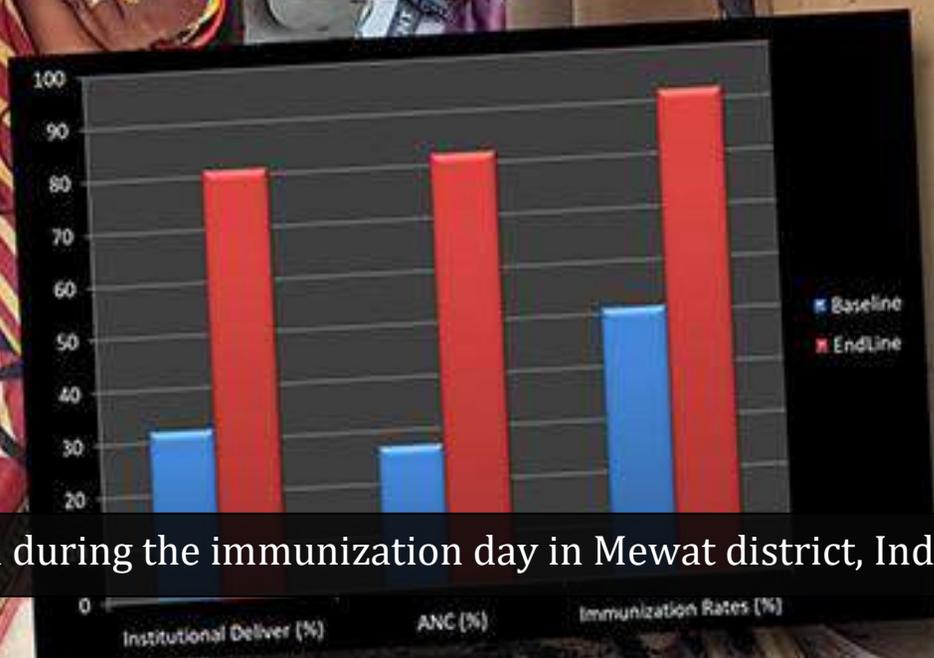


Household visit by a MIRA worker (VHT) in Jinja, Uganda

# 15. MIRA Impact – Transforming the Health System

Operational in Mewat district of Haryana in India, MIRA has reached to over 850,000 women and children through SHGs (Self Help Groups) and other innovative channels including telecom operators, re-charge kiosks, community radio stations and schools. MIRA Toolkit has been rolled out with 100 MIRA workers in 128 villages covering almost 144,000 people. In the intervention area, there is an increase in ANC visits by 55%, institutional deliveries by 49% and immunization rates by 41%. PHC Connect model was piloted with 47 ASHAs and 10 ANMs, reaching to 69,000 women and children. Prompt action has been taken by ANMs in 84% of the High Risk Pregnancy (HRPs) queries raised by ASHAs.

MIRA is currently operational in Uganda and Afghanistan. MIRA has reached to a population of 66,000 in Uganda and 43,000 in Afghanistan. 2,900 women in Uganda and 1,700 women in Afghanistan have successfully completed their pregnancies through MIRA. MIRA has reached to 4,200 children for immunisation and 6,000 adolescent girls in Uganda; and 2,700 children for immunization and 3,500 adolescent girls in Afghanistan. In these project areas; institutional deliveries have increased by 46%, ANC visits have increased by 44% and immunization rates have increased by 11% in Uganda; and institutional deliveries have increased by 54%, ANC visits have increased by 56% and immunization rates have increased by 11%. In last 18 months, in the area of project implementation, there has not been a single maternal death reported in Uganda and only two maternal deaths have been reported in Afghanistan. As a recognition to MIRA Channel's impact in the communities, 51 infant girls in Uganda have been named MIRA.



Mother proudly holds her healthy baby post vaccination during the immunization day in Mewat district, India



Mother visiting the Maladan health center to get her child immunized in Herat province, Afghanistan



MIRA worker (VHT) dispensing vital information to a mother on danger signs in a newborn child in Ntenge village in Jinja, Uganda



Team ZMQ holding a newborn girl who was named 'MIRA' by her parents



New mothers holding their healthy babies after a safe institutional delivery in Jinja, Uganda

## 16. Carving the Future Boundaries of MIRA

MIRA Channel has unfolded immense potential for technological advancement in public healthcare system. In India, state health department from Odisha, Rajasthan and Jharkhand have expressed their interest in adoption of MIRA Channel. It is being expanded to two districts in western Uganda - Mbarara and Kabarole districts, with a possibility of adoption by Ministry of Health Uganda. In Afghanistan, there is an interest from Ministry of Health to replicate MIRA in Pashto and other local languages, Uzbek and Turkmen. We plan to replicate MIRA in Pashto speaking areas especially Kabul and suburbs. The results will be submitted to the respective Ministries of Health for possible adoption at the national level.

There is an increased demand by communities to embed '*YourStoryTeller*' in MIRA for effective storytelling on MCH. This will enable less-literate women quickly understanding critical health issues. We are also integrating IoT based Toys under '*Toys4Change*' initiative to provide consistent information to 'difficult-to-reached' communities who don't have access to connectivity. MIRA has proved to be a very impactful last-mile healthcare model. ZMQ now plans to replicate MIRA in other low and middle income countries. We have just commenced in Rwanda and plan to replicate MIRA in Ethiopia and Malawi in East Africa, and Senegal and Sierra Leone in West Africa. ZMQ also intends to replicate MIRA in Laos and Cambodia in South East Asia, and some countries in Latin America. We are open for partnerships.



MIRA - Changing lives for a healthier tomorrow

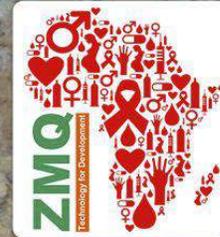


ZMQ team with children in Wairaka village in Jinja, Uganda. Creating hopes for a brighter tomorrow



# MIRA CHANNEL

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